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ABSTRACT

This digest concerns itself with the origin of reflective thought, the application of theories about reflective thought to classrooms, conflicts and issues, and a synthesis of the essential ideas. Sections of the Digest address origin of the idea of reflective thought, definitions of reflective thinking, questioning strategies, how to generate problems, examples of problem-setting in a first-grade or kindergarten classroom, and evaluation of reflective skills. (RS)

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Reflective Thought, Critical Thinking

by S. Samuel Shermis

Introduction

This digest concerns itself with the origin of reflective thought, the application of theories about reflective thought to classrooms, conflicts and issues, and a synthesis of the essential ideas.

Origin of the Idea of Reflective Thought

The concept "reflective thought" was introduced by John Dewey in 1910 in his *How We Think*, a work designed for teachers. Dewey admitted a debt to both his contemporaries in philosophy, William James, and Charles S. Peirce. Dewey's most basic assumption was that learning improves to the degree that it arises out of the process of reflection. As time went on, terminology concerning reflection proliferated, spawning a host of synonyms, such as "critical thinking," "problem solving," and " higher level thought."

Definitions

Dewey's definition of reflective thinking repeated over the years was

> "Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends". (Dewey, 1933)

However, other researchers added to this definition and modified it. Thus,

> "The purpose of Socratic Seminars is to enlarge understanding of ideas, issues, and values. The intent is to create dialogue that gives voice to rigorous thinking about possible meaning... Seminars are structured to take the student thought from the unclear to the clear, from the unreasoned to the reasoned. . . from the unexamined to the examined." (Lambright, 1995)

Many other definitions exist, but what all have in common is conviction. Some are of the more generalized nature, such as the two above. Others assume that true reflective thinking can only be derived from the application of the various intellectual disciplines.

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Questioning

For the last four decades consensus thinking is that reflection in a classroom can take place only when a questioning strategy promotes it. Paradigms and models of questioning have proliferated endlessly. All begin with the assumption that there are unproductive, sterile questions that throttle student thought. Thus, Wasserman (1992) talks about "stupid questions" which ignore student ideas, are "insensitive to the feelings or ideas being expressed," or are irrelevant and disrespectful.

Dead-end questions may be too complex for student experience, may not provide sufficient "wait time" for students to process the question, may involve trick questions or those which ask a question whose answer can be found in the text or lecture of the teacher.

Questions which promote thought begin with the assumption that students do not think unless they have something to think about. Dewey, Hullfish and Smith, Hunt and Metcalf, Bigge, and Bayles argued that this "something" can only be a problem. But the problem must be real, i.e., internalized, felt by students. "Pseudo problems" occur when the importance of the problem is ignored or when a problem is assumed to exist because the teacher or text defines it as a problem. Thus, "What were the causes of the Civil War?" has been a problem to historians for many years. It is unlikely to be one to students.

Many authors (Simpson, 1996) have attempted to create paradigms of questioning, including Simpson, Weast, Hauser and Wasserman. What all of these different paradigms have in common is the strongly held conviction that the traditional, text bound, information coverage, low-level questioning must be replaced by a more fruitful approach that stimulates students to reflect on problems.

Problems

How to Generate Problems. A problem exists when a student is curious, puzzled, confused, or unable to resolve an issue. A situation which was clear and untroubled has now become clouded or obstructed. In recent years, scholars have attempted to come up with useful, generic models of problem setting:

- asking students to devise alternative ways of presenting information, i.e., alternative to text or teacher
- comparing different accounts of the same events, ideas, phenomena
- supplying alternative endings, writing different outcomes
- role-playing, role reversal, attempting to discern what was left out, what was inconsistent

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- inserting ideas that do not appear to "belong" in a text
- deleting or omitting information
- playing "what if"
- examining the social context of a given statement
- attempting to identify the assumption

Examples

The notion that very young children cannot deal with problems is simply false. Here is an example of problem-setting in a kindergarten or first-grade class discussing Jack and the Beanstalk:

Q. What did Jack do when he got to the giant's castle?"

A. Jack hid from the giant, found the goose that lays the golden eggs, was discovered by the giant, fled, reached the bottom of the vine, and then chopped it down. The giant, of course, tumbles down, breaks his neck, and Jack lives happily every after with his mother and his newly found wealth.

Q. Did Jack trespass illegally? (In kindergarten terms, "Did Jack go into someone's house where he did not belong?"

A. Yes!

Q. Did Jack steal the goose that lays golden eggs?"

A. Yes!

Q. Did Jack, then, refuse to give back what did not belong to him?

A. Yes!

Q. Then did Jack escape down the bean vine and cause the giant to be killed?"

A. Yes!

Q. If Jack trespassed, stole, and murdered the giant, why is the giant the villain of this story?

The twist at the end of this questioning strategy takes a very old story, with a comfortable conclusion designed to make everything turn out just right, and turns it on its head: why, in light of the admitted crimes that Jack committed, isn't he the baddie? (Shermis, 1992).

There is no course, age, or grade where reflective theory cannot be applied. Reflective theory simply says that if you wish to generate a problem, enter the thinking and knowing patterns of your students. And then ask them questions which create conflict and confusion. And then help them reach an answer. And attempt to recognize a 24 carat gold question when you hear it. For example, if a student who has been paying attention to the usual information on animal and fish camouflage asks, "How come the Monarch butterfly is so colorful when this makes it easier for a predator to see?" has just asked precisely such a question. There is an infinite number of such questions, just waiting for teachers to recognize or ask. These questions promote the reflection that provides the best kind of learning that human beings have so far invented.

Evaluation

Any educational evaluation stems from the educational purposes specified in advance of teaching. If one wishes to teach reflectively and hold reflective discussions, then the purposes, goals, or objectives must mandate such discussion. This necessarily precludes evaluation that emphasizes memorization. Memorization is what is ordinarily measured by conventional objective tests--true false, fill in, matching, and completion.

What evaluation is mandated? Lambright cites Cross who maintains that, "If you want to teach critical thinking . . .we suggest that you devise an exercise that requires students to practice critical thinking and simultaneously demonstrate their progress in achieving that complex skill." Some researchers have insisted that appropriate evaluation "must go beyond acquiring facts and learning theories -- they must apply knowledge." (Lambright) However, application of knowledge, in terms of the Bloom Taxonomy, is technically Level III, which is not especially reflective. Reflective thought involves acquisition of facts, understanding of ideas, application of principles, analysis, synthesis and evaluation. In short, reflective thought and reflective teaching involve all levels of the Bloom Taxonomy.

Perhaps the most complete listing of reflective skills may be found in Weast (1996):

- identifying the author's conclusion;
- identifying the reasons and the evidence
- identifying vague and ambiguous language
- identifying value assumptions and value conflicts
- identifying descriptive assumptions
- evaluating statistical reasoning
- evaluating sampling and measurements
- evaluating logical reasoning
- identifying omitted information
- articulating one's own values in thoughtful, fair-minded way.

These skills are the ones which, over the last six or seven decades, have tended to be emphasized by advocates of reflective thought and teaching. They continue to be emphasized. The continuing emphasis is a valid index to the fact that they are still not in schools.

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